# Special Issue

# Flow Cytometry for Safety Assessment in Drug Discovery

## Message from the Guest Editor

Flow cytometry is a single-cell-based technology allowing the exhaustive and dynamic molecular phenotyping of cells, both in vitro and ex vivo. While flow cytometry has found its classical applications in clinical medicine, in recent years flow cytometry methods have been successfully involved in the safety assessment of new molecular entities in preclinical drug development. Multiparametric flow cytometry analysis is an excellent tool for examining both the on-target and off-target effects of drug candidates, thus providing data on their efficiency and safety as well as allowing the mapping of toxicity pathways. On the other hand, real-time cytometry is suitable for detecting short-term and reversible drug effects on molecular dynamics and provides a suitable system to predict both acute and chronic effects of chemical compounds and biological modulators. The technical improvements in highthroughput flow cytometry applications are also an added value for preclinical drug discovery stages, as they allow for the performance of large multiparametric screening campaigns based on miniaturized cell-based assays, thus providing a cost-efficient system for pharmaceutical development.

### **Guest Editor**

Prof. Dr. José-Enrique O'Connor

Department of Biochemistry, School of Medicine, University of Valencia, 46010 Valencia, Spain

## Deadline for manuscript submissions

closed (20 December 2024)



# International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed



mdpi.com/si/186794

International Journal of Molecular Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 ijms@mdpi.com

mdpi.com/journal/ ijms





# International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed





# Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

#### **Editor-in-Chief**

#### Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences, Sez-Biochimica, Faculty of Medicine, Università Politecnica delle Marche, Via Ranieri 65, 60100 Ancona, Italy

#### **Author Benefits**

#### **Open Access:**

free for readers, with article processing charges (APC) paid by authors or their institutions.

## **High Visibility:**

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

